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U.S. Is Deploying a Monitor System for Germ Attacks

By JUDITH MILLER

WASHINGTON, Jan. 21 — To help protect against the threat of bioterrorism, the Bush administration on Wednesday will start deploying a national system of environmental monitors that is intended to tell within 24 hours whether anthrax, smallpox and other deadly germs have been released into the air, senior administration officials said today.

The system uses advanced data analysis that officials said had been quietly adapted since the Sept. 11 attacks and tested over the past nine months. It will adapt many of the Environmental Protection Agency's 3,000 air quality monitoring stations throughout the country to register unusual quantities of a wide range of pathogens that cause diseases that incapacitate and kill.

Officials said that although the system would not by itself protect Americans against a germ attack, early detection of such a strike would give the government more time to mobilize medical resources that could save thousands, and even hundreds of thousands of lives. The faster those exposed to most deadly pathogens are vaccinated against a disease, or treated with antibiotics to combat it, the lower the death rate.

Under the system, the E.P.A. monitoring stations will send samples of a tissue-like paper from newly upgraded machines that filter air to the closest of some 120 laboratories across the country associated with the federal Centers for Disease Control and Prevention. Results will be available within 24 hours, and possibly within 12 hours.

Although officials declined to say which or how many E.P.A. monitoring stations would ultimately be used, experts on the government's program said the first environmental monitoring stations in the new system, called Bio-Watch, were in New York. The city has more than seven such stations. The stations, which are all outdoors, now mainly monitor for air pollution.

"We will ramp up to other cities and areas of concentrated populations very quickly," one official said. "Within a matter of days, we will be able to tell in almost any major urban area whether a large release of a dangerous pathogen has occurred, what was released, and where and when it occurred."

Officials said today the introduction of the system by the newly created Department of Homeland Security was not linked to a specific terrorist threat. The intelligence community, one senior official noted, has "no credible evidence that Al Qaeda has acquired biological weapons, or any weapon of mass destruction at this time."

But the system is being deployed as the Bush administration moves toward deciding whether to use military force against Iraq. After the 1991 Persian Gulf war, Iraq declared having made thousands of gallons of liquid

anthrax, botulinum toxin and other pathogens that cause disease, and it may have kept stocks of deadly smallpox virus as well.

Although Baghdad says it has destroyed these stockpiles, American officials believe it is hiding some of its chemical and germ agents, and that it tested anthrax as an aerosol before the gulf war.

However, one senior official said, the new environmental surveillance system was not being deployed specifically because of Iraq, but "to prepare the country for whatever the weapon and whomever the culprit might be."

While environmental monitoring does not provide instant detection of the release of a dangerous germ, the new system is aimed at giving health officials more time to send doctors, vaccines, antibiotics and medical equipment to the scene of a bioterror attack. Doctors and terrorism experts have long said that the lack of such a system is one of the most glaring deficiencies in the nation's biodefenses.

While the government is still working to develop cheap and reliable instant detectors, the technology has yet to be perfected, officials said. The hand-held detectors, which have been distributed in some cities, and others that are now being tested provide what experts call too many "false positives" — mistaken identifications of a germ release.

The new environmental surveillance system uses monitoring technology and methods developed in part by the Department of Energy's national laboratories. Samples of DNA are analyzed using polymerase chain reaction techniques, which examine the genetic signatures of the organisms in a sample, and make rapid and accurate evaluations of that organism.

Officials who helped develop the system said that tests performed at Dugway Proving Ground in Utah and national laboratories showed that the system would almost certainly detect the deliberate release of several of the most dangerous pathogens. "Obviously, the larger the release, the greater the probability that the agent will be detected," an official said. "But given the coverage provided by the E.P.A. system, even a small release, depending on which way the wind was blowing and other meteorological conditions, is likely to be picked up."

The anthrax attacks of October 2001 would probably not have been detected by the new system, officials said, mainly because the outbreak was caused by a tiny amount of anthrax — one to two grams — and because the release was indoors, where the sensors do not monitor.

Officials said the new system would not detect releases in such places as shopping malls, subways and other covered areas.

"But the system is calibrated to detect relatively small amounts of some of the agents of greatest concern," an official said, referring to smallpox and larger releases of anthrax.

While officials declined to disclose how much the program would cost, they said it was relatively inexpensive. They said it would cost about \$1 million to provide upgraded filters to the selected air quality monitoring stations and another \$1 million per city a year for analyzing samples.

A senior administration official said the White House did not plan to announce the start of the system.

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